10 CFR 50.73



NMP1L3237 August 18, 2018

> U. S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, DC 20555-0001

> > Nine Mile Point Nuclear Station, Unit 1 Renewed Facility Operating License No. DPR-63 Docket No. 50-220

Subject: Revision 1 to Licensee Event Report 2017-002, Manual Reactor Scram Due to Pressure Oscillations

Licensee Event Report (LER) 2017-002, Manual Reactor Scram Due to Pressure Oscillations., was submitted on May 18, 2018 in accordance with 10 CFR 50.73(a)(2)(iv)(A). Attached is Revision 1 to LER 2017-002. This revision is to update the time line of actions for the subject event.

There are no regulatory commitments contained in this letter.

Should you have any questions regarding the information in this submittal, please contact Dennis Moore, Site Regulatory Assurance Manager, at (315) 349-5219.

Respectfully,

Robert E. Kreider Jr. Plant Manager, Nine Mile Point Nuclear Station Exelon Generation Company, LLC

REK/RSP

Enclosure: NMP1 Licensee Event Report 2017-002, Manual Reactor Scram Due to Pressure Oscillations

cc: NRC Regional Administrator, Region I NRC Resident Inspector NRC Project Manager

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Enclosure

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NMP1 Licensee Event 2017-002, Manual Reactor Scram Due to Pressure Oscillations

Nine Mile Point Nuclear Station, Unit 1

Renewed Facility Operating License No. DPR-63

NRC FC	DRM 366		U.S.	NUCLE	AR REG	ULATO	DRY CON	MISSION	APPR	OVE	ED BY OMB: NO.	3150-0104	ļ		ĒXPIRES	: 03/31/2020
(04-2017) (See N http://www.	UREG-1	LICE (See Page 022, R.3 hrc.gov/re	2 for requir for instruc ading-rm/	ed numbe tion and doc-colle	NT RE er of digits/ guidance ections/nu	EPOI /charact e for co uregs/s	RT (LE ers for eac mpleting ⁻ taff/sr102	ER) h block) this form (2/r3/)	Estimate Reported Send co Nuclear Resourc NEOB-1 used to i NRC ma collection	ed b d les mm Reg e@r 0202 impo ay n n.	burden per response ssons learned are inc lents regarding burder gulatory Commission, nrc.gov, and to the 2, (3150-0104), Office of see an information colli- lot conduct or sponso	to comply wi orporated into a estimate to Washington, Desk Officer, of Managemer ection does no r, and a pers	th this a the lice the Info DC 20 , Office at and Bu at display on is no	mandatory cc ensing proces irmation Servic 0555-0001, or of Informati- udget, Washin y a currently va ot required to	ellection red s and fed l ces Branch by e-mai on and Re on and Re lid OMB co respond to	uest: 80 hours. back to industry. (T-2 F43), U.S. to Infocollects. egulatory Affairs, 0503. If a means ntrol number, the , the information
1. FACI	LITY NA	ME		•					2. DC	CF	KET NUMBER		3. P/	AGE		
Nine Mile Point Unit 1						050	05000220 1 OF <u>6</u>					<u>i</u>				
4. TITLI	E					-										
Man	ual Rea	actor Sc	ram Du	e to Pre	essure	Oscil	ations						_			
5. E	VENT D	ATE	6.	. LER NU	JMBER		7. F	REPORT	DATE		8.	OTHER F	ACILI		OLVED	_
MONTH	DAY	YEAR	YEAR	SEQUE NUM	ENTIAL IBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME NA		DOCKET NUM				
3	20	17	2017	- 02	-	<u>01</u>	5	18	17	1	NA NA				NA	KET NUMBER
9. OPERATING MODE 11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)																
	□ 20.2201(b) □ 20.2203(a)(3)(i) □ 50.73(a)(2)(ii)(A) □ 50.73(a)(2)(viii)(A)									2)(viii)(A)						
			20.2201(d)			20.2203(a)(3)(ii		(ii)		50.73(a)(2)(ii)(B)			50.73(a)(2)(viii)(B)			
	1		20.2203(a)(1)				20.2203(a)(4)			50.73(a)(2)(iii)				50.73(a)(2)(ix)(A)		
			20.2203(a)(2)(i)				50.36(c)(1)(i)(A)		A)	50.73(a)(2)(iv)(A)				50.73(a)(2)(x)		
10. POV	NER LEV	/EL	20.2203(a)(2)(ii)			50.36(c)(1)(ii)(A)		(A)	50.73(a)(2)(v)(A)				73.71(a)(4)			
			20.2203(a)(2)(iii)				50.36(c)(2)			50.73(a)(2)(v)(B)				73.71(a)(5)		
			20.2203(a)(2)(iv)				50.46(a)(3)(ii)				50.73(a))(2)(v)(C)		73	3.77(a)(⁻	[)
	004		20.2203(a)(2)(v)			50.73(a)(2)(i)(A			A)	50.73(a)(2)(v)(D)				73.77(a)(2)(i)		
			20.2203(a)(2)(vi)				🔲 50.73(a)(2)(i)(B		В)		🗍 50.73(a))(2)(vii)	Τ	7	3.77(a)(2	2)(ii)
			n an	, <u>,</u>		50.73(a)(2)(i)(C			C)	OTHER Specify in Abstract below or in NRC Form 366A				rm 366A		
						12. L	CENSEE	CONTAG	CT FOR	ΤН	IS LER					_
LICENSEE Deni	contact nis Moc	ore. Site	e Regula	torv As	suranc	e Ma	nager					ΤΈ	ELEPHO	ONE NUMBER (315)3	R (Include) 349-52	Area Code) 19
			13. COM	PLETE (E FOR	EACH C	OMPONE		.UF	RE DESCRIBED	I IN THIS	REPC	DRT		
CAUS	E	SYSTEM	COMP	ONENT	MANU	J- RER	REPORTA TO EPI	BLE X	CAUSE		SYSTEM	COMPON	ENT	MANU- FACTURI	ER	REPORTABLE TO EPIX
В		JJ	\ \	<i>v</i>	GE		Y		В		JJ	RLY	′	GE		Y
14. SUP	PLEMEN	ITAL RE	PORT EX	PECTED)						15. EXP	ECTED		MONTH	DAY	YEAR
SUBMIS			SION	SION DATE) 🛛 NO				SUBMISSION DATE			NA	NA	NA			
ABSTRA On Ma This ev resulted	CT <i>(Limit</i> rch 20, vent is r d in a m	to 1400 sp 2017 a reportab nanual c	paces, i.e., a t 02:27, ole under or autom	approximation Nine March 10 CF Natic act	titely 15 sir Aile Poi R 50.7 tuation	int Ur 2 (b)(of an	nit 1 per 2)(iv)(H y of the	ritten lines) formed 3) and 1 e system	a manu 0 CFR s listed	ual 50 I in	l scram of the 0.73(a)(2)(iv) 1 10 CFR 50.	e reactor (A) as a 73(a)(2)	due iny e)(iv)(to press event or ((B).	ure os conditi	cillations. on that
scram. procedu caused through	The sc urally r by a cc a wor	equired ombinat	is requir limit. T ion of th ng which	ed at ap The app te fouli h create	pproximpro	was 1 nately ause he Ml ction	of this e R's pre-	ess at the actor po event wa essure so l sticktio	wer wh as Mec ensing on of th	hen han bel	n pressure os nical Pressur llows line an linkage.	cillation e Regula d a bypa	s occ ator (ass re	curred ex (MPR) c elay link	a was ceedin oscillat age pa	ng the ions ssing

The event described in this LER is documented in the plant's corrective action program.

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NRC FORM 366A U.S. NUCLEAR REGULAT	ORY COMMISSION	APPROVED BY OMB: NO. 315	0-0104		S: 03/31/2020
SEAR RED ULA		Estimated burden per response to complessons learned are incorporated into	the licensing	andatory collection request a process and fed back to	o industry. Send
LICENSEE EVENT REP	ORT (LER)	Regulatory Commission, Washir	o the informa ngton, DC	20555-0001, or t	-43), U.S. Nuclear by e-mail to
CONTINUATION S	HEET	NEOB-10202, (3150-0104), Office of Ma	anagement and	d Budget, Washington, DC 2	20503. If a means
(See NUREG-1022, R.3 for instruction and guidance for on http://www.nrc.gov/reading-rm/doc-collections/nuregs/	completing this form /staff/sr1022/r3/)	NRC may not conduct or sponsor, an collection.	n does not dia nd a person i	s not required to respond	to, the information
1. FACILITY NAME	2. DOC	KET NUMBER		3. LER NUMBER	3
Nine Mile Point Unit 1	05000220		YEAR	SEQUENTIAL NUMBER	REV NO.
NARBATIVE			2017	- 002	<u>- 01</u>
I. DESCRIPTION OF EVENT					EXPIRES: 03/31/2020 any collection request: 80 hours. Reported cess and fed back to industry. Send fee of information and Regulatory Affairs, get, Washington, DC 20503. If a means a currently valid OMB control number, the required to respond to, the information 3. LER NUMBER SEQUENTIAL NUMBER 002 - 01 vas in-progress. 17 refueling outage, ons exceeding a t the time of the chanical pressure ment. When The Controls (iv)(B) for the porting requirements. A).
A. PRE-EVENT PLANT COND	DITIONS:				
Prior to the event, Nine Mile Poir	at Unit 1 (NMP1)	was offline and reactor	shutdow	n was in-progre	ss.
Reactor power was approximately	y 4%.			2 0	EXPIRES: 03/31/2020 ry collection request: 80 hours. Reported ress and fed back to industry. Send evices Branch (T-2 F43), U.S. Nuclear 155-0001, or by e-mail to fice of information and Regulatory Affairs, yet, Washington, DC 20503. If a means 1 currently valid OMB control number, the required to respond to, the information 1. LER NUMBER SEQUENTIAL NO. 002 - 01 17 refueling outage, ons exceeding s at the time of the hanical pressure ment. When The Controls (iv)(B) for the porting requirements. A). NTRIBUTED TO
B. EVENT:					
On March 20, 2017 at 0227, durin	ng a scheduled rea	actor shutdown in suppo	ort of the	2017 refueling	outage,
Operators at Nine Mile Point Uni	t 1 inserted a man	iual scram due to pressu	re oscili	ations exceeding	5 4h a
procedural limits. INVEL was on	tor nower. Contr	Eduled reactor snutdown	in-prog	ress at the time of the mass at the time of time of the time of ti	of the
regulator (MPR) oscillations caus	sing pressure char	of Koom Operators reco	valve m	ovement When	
pressure oscillations exceeded the	ang pressure enan-	mired limit the Reactor (Onerator	r at The Controls	
manually inserted the reactor scra	am.		•r•		,
		•			
Nine Mile Point Unit 2 (NMP2) v	vas and remained	at 100% throughout the	e event.		
Operations performed the ENS no	otification (#5262	4) required by 10 CFR (50.72(b)	(2)(iv)(B) for the	ie
manual reactor scram due to press	sure oscillations.	This notification met th	e 4 hour	reporting requir	rements.
This LER is being submitted purs	suant to the requir	ements of 10 CFR 50.73	3(a)(2)(i	v)(A).	<pre>ark to inclusity. Use Nuclear r by e-mail to n and Regulatory Affairs, DC 20503. If a means DMB control number, the bond to, the information IBER - REV NO. - 01 - 01 - 01 - 01 - 01 - 01 - 01 - 01</pre>
C. INOPERABLE STRUCTURE	ES, COMPONE	NTS, OR SYSTEMS	THAT	CONTRIBUTI	ED TO
THE EVENT:					
None					

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NRC FORM 366A (04-2017)) U.S. NUCLEAR REGULATO U.S. NUCLEAR REGULATO (04-2017)) LICENSEE EVENT REP CONTINUATION S (See NUREG-1022, R.3 for instruction and guidance for c http://www.nrc.gov/reading-rm/doc-collections/nuregs/	ORY COMMISSION ORT (LER) HEET completing this form (staff/sr1022/r3/)	APPROVED BY OMB: NO. 3150-0104 EXPIRES: 03/31/2020 Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear. Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.					
1. FACILITY NAME	2. DO(CKET NUMBER	3. LER NUMBER				
Nine Mile Point Unit 1	05000220		year 2017	SEQUENTIAL NUMBER - 002	REV NO. - 0 <u>1</u>		
 NARRATIVE D. DATES AND APPROXIMAT March 19, 2017 19:25 – Operations transfers Reas System's Electronic Pressure Regreactor shutdown for 2017 refuelt 20:01 – Operations commences r March 20, 2017 00:01 – With the reactor at appro 00:38 – In support of surveillance power was 18.8% at the time of t as expected and reactor pressure 02:06 – The second turbine overs power was at approximately 13.5 2.0 to 2.5 psig reactor pressure or 02:20 – Operators entered the sporeactor pressure oscillations of 2- 02:27 – Operators inserted a man limits. E. OTHER SYSTEMS OR SECC None F. METHOD OF DISCOVERY: Control Room Operations were c and after turbine overspeed testir promptly identified and Control I of any ongoing field work. 	TE TIMES OF I actor Pressure Co gulator (EPR) to f ing outage. eactor shutdown wimately 24% po e testing the first he overspeed trij oscillations were speed test, "Back 6% at the time of scillations. ecial operating p -3 psig. ual scram of the DNDARY FUN closely monitorin ng. The pressure Room Operation	MAJOR OCCURRE ontrol from the Turbine the Mechanical Pressur ower the Main Turbine of two turbine overspe p. Throughout the overspe p. Throughout the overspe well within procedura to overspeed Trip Te the second overspeed to rocedure for Pressure F reactor due to pressure ICTIONS AFFECTE	NCES: Mechanic re Regulat was taken was peed trip 1 limits. Acgulator I was part coscillatio D: beciated crift e bypass v the indicat	cal Hydraulic Cor or (MPR) in sup or (MPR) in sup a offline. vas performed. It test the MPR re- performed. Read APR response re- Malfunction, du ons exceeding pu- tical parameters valve movement ions were not th	ontrol pport of Reactor sponded ctor esulted in e to rocedural during t was he result		

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NRC F	ORM 366A U.S. NUCLEAR REGULAT	ORY COMMISSION	APPROVED BY OMB: NO. 315	50-0104	EXPIRE	S: 03/31/2020		
(04-2017)) (See) LICENSEE EVENT REP CONTINUATION S NUREG-1022, R.3 for instruction and guidance for	YORT (LER) SHEET	Estimated burden per response to complessons learned are incorporated into comments regarding burden estimate fregulatory Commission, Washii Infocollects.Resource@nrc.gov, and to NEOB-10202, (3150-0104), Office of Mi used to impose an information collectic NRC may not conduct or sponsor, and to the sponsor, and the total sponsor of the sponsor of the sponsor.	ply with this may be the licensing to the Informangton, DC the Desk Offic anagement and on does not dis and a person is	andatory collection request: 8 g process and fed back to tion Services Branch (T-2 F 20555-0001, or b er, Office of Information and d Budget, Washington, DC 2 splay a currently valid OMB c s not required to respond	30 hours. Reported 5 industry. Send 43), U.S. Nuclear by e-mail to 1 Regulatory Affairs, 20503. If a means control number, the to. the information		
<u>htt</u>	p://www.nrc.gov/reading-rm/doc-collections/nuregs	/staff/sr1022/r3/)	collection.					
1. FACILITY NAME		2. DOC	CKET NUMBER	3. LER NUMBER				
Nine	Mile Point Unit 1	05000220		<u>уеа</u> я 2017	NUMBER	NO. - 0 <u>1</u>		
NARRA	TIVE							
	G. MAJOR OPERATOR ACTIO Based on the monitoring of plan Operators performed a manual se	DN: t conditions and i cram of the reacto	n accordance with static or.	on procee	iures Control Rc	om		
	H. SAFETY SYSTEM RESPON All safety systems responded as	ISES: expected.						
п.	CAUSE OF THE EVENT: The apparent cause of this event was found within the cylinder stroke of the Crud collecting in the MPR pressure MPR. Overspeed testing performed a in transport of crud through the press exhibit limit cycle behavior (pressure	a partial blockag he Mechanical Hy sensing bellows at 13.5% power c sure sensing bellc e oscillations).	ge within the MPR sensi ydraulic Control (MHC) line resulted in overdam aused large pressure sw ows line. The over damp	ng line c Bypass nped feec ings in tl ed feedb	oupled with hys Relay. Iback signals to he sensing lines, back caused the M	teresis the resulting MPR to		
	Additionally, there was hysteresis with through a worn bushing resulting in	ithin the MHC By a friction induced	ypass Relay caused as th I sticktion.	ie bypass	s relay linkage p	assed		
	The partial blockage within the MPR normal pressure oscillations at low p acceptable limits.	ς sensing line and ower levels, lead	I the Bypass Relay hyste to reactor pressure swir	eresis, wl 1gs outsi	hen combined wi de the procedura	ith ılly		
III.	ANALYSIS OF THE EVENT: This event is reportable under 10 CFF condition that resulted in a manual or 50.73(a)(2)(iv)(B). Due to pressure os manually actuated, resulting in a reac associated with this event. All safety	R 50.72 (b)(2)(iv) automatic actuat scillations exceed tor scram. There systems and bala	(B) and 10 CFR 50.73(a ion of any of the system ling the procedurally req were no nuclear safety c ance of plant equipment	a)(2)(iv)(as listed i puired lir conseque responde	(A) as any event n 10 CFR nit, the RPS syst nces or concerns ed as expected.	or em was s		

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NRC FORM 366A U.S. NUCLEAR REGULAT	ORY COMMISSION	APPROVED BY OMB: NO. 31	50-0104	EXPIRE	S: 03/31/2020		
(04-2017)) LICENSEE EVENT REP CONTINUATION S (See NUREG-1022, R.3 for instruction and guidance for http://www.nrc.gov/reading-rm/doc-collections/nuregs	YORT (LER) SHEET completing this form /staff/sr1022/r3/)	Estimated burden per response to con lessons learned are incorporated in comments regarding burden estimate Regulatory Commission, Wash Infocollects.Resource@nrc.gov, and to NEOB-10202, (3150-0104), Office of M used to impose an information collect NRC may not conduct, or sponsor, a collection.	nated burden per response to comply with this mandatory collection requires learned are incorporated into the licensing process and fed bar ments regarding burden estimate to the Information Services Branch (1) latory Commission, Washington, DC 20555-0001, or collects.Resource@nrc.gov, and to the Desk Officer, Office of Information B-10202, (3150-0104), Office of Management and Budget, Washington, I to impose an information collection does not display a currently valid OC imay not conduct or sponsor, and a person is not required to respond to respond to the conduct.				
1. FACILITY NAME	2. DOC	KET NUMBER	3. LER NUMBER				
Nine Mile Point Unit 1	05000220	,	YEAR		REV NO.		
	L		2017	- 002	- 0 <u>1</u>		
 IV. CORRECTIVE ACTIONS: A. ACTION TAKEN TO RETURN STATUS: 1. The pressure so flushed 2. The bypass rel 	RN AFFECTEE ensing bellows l ay was repaired.	O SYSTEMS TO PRE	E-EVEN	T NORMAL	vas		
 B. ACTION TAKEN OR PLAN 1. Implementation filling of the pre-replace when red 2. Revision of asso 3. Revised the Tur above 21 percenthe overspeed te 	NED TO PREV of a two year pre ssure sensing bell quired. bine d procedures bine Trip Tests pr at power to minim- st.	ENT RECURRENCE ventive maintenance ac lows line and associated s to include steps to flue cocedure to ensure turbi ize the possibility of pr	E: tivity for d piping sh and ba ne overs essure os	r routine flushing with contingenci ackfill sensing lin peed testing is co scillations as a re	g and les to nes. completed esult of		
v. ADDITIONAL INFORMATION	:						
A. FAILED COMPONENTS: Mechanical Hydraulic Control (I Mechanical Pressure Regulator (Pressure sensing bellows line	ИНС) Bypass Re MPR)	lay					
B. PREVIOUS LERS ON SIMII 99-04 – "Reactor Scram Due to I Switch Position not in Conforma the failure of the MPR pressure s vendor treated the valve with exc feedback loop	AR EVENTS: Mechanical Press ince with Technic suppressor valve (cessive corrosion	ure Regulator Suppress al Specifications". The (a J. A. Campbell Comp inhibitor which led to a	or Valve e cause o pany Mic in interna	Failure and Mo f the reactor scra ro-Bean Valve). al blockage in the	de um was The e MPR		

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NRC FORM 366A (04-2017)) LICENSEE EVENT REP CONTINUATION S (See NUREG-1022, R.3 for instruction and guidance for c http://www.nrc.gov/reading-rm/doc-collections/nuregs/	ORY COMMISSION ORT (LER) HEET ompleting this form staff/sr1022/r3/)	APPROVED BY OMB: NO. 319 Estimated burden per response to com lessons learned are incorporated int comments regarding burden estimate Regulatory Commission, Washi Infocollects.Resource@nrc.gov, and to NEOB-10202, (3150-0104), Office of M used to impose an information collection NRC may not conduct or sponsor, a collection.	50-0104 ply with this may be the licensing to the Informal ngton, DC the Desk Office anagement and on does not dis nd a person i	EXPIRE andatory collection request: 6 g process and fed back to tion Services Branch (T-2 f 20555-0001, or b 20555-0001, or b er, Office of Information and d Budget, Washington, DC 2 play a currently valid OMB o s not required to respond	S: 03/31/2 30 hours. Rep 5 industry. -43), U.S. Nu IV e-mail I Regulatory A 20503. If a m sontrol numbe to, the inform
. FACILITY NAME	2. DOC	KEI NUMBER		3. LER NUMBER	
Nine Mile Point Unit 1	05000220		YEAR 2017	- 002	NO. - 0 <u>1</u>
IDENTIFIER AND SYSTEM IN THIS LER:	NAME OF EA	CH COMPONENT (DR SYS	TEM REFERR	ED TO
Component		IEEE 803		IEEE 805	
Mechanical Pressure regulato	RG	RG		11	
Electric Pressure Regula	RG	RG			
Mechanical Hydraulic Control B	ypass Relay	RLY	11		
Main Turbine		TRB		JJ	
Reactor Vessel		RPV		AD	
Suppressor Valve		V		JJ	
B. SPECIAL COMMENTS: None		1			